INTEGRATED LOGISTICS SUPPORT PLAN

for the

VOTKINSK PORTAL MONITORING PROGRAM

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RECORD OF REVIEWS AND CHANGES

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FOREWORD

For the purposes of this document, prime mission equipment (PME) is limited to the CARGOSCAN System (CS) and the CONTINUOUS MONITORING System (CMS). However, HTSC is supporting many other types of equipment associated with maintaining and operating a remote site located in the middle of Russia. Some of these other types of equipment include but are not limited to refrigeration, medical, kitchen, water filtration, recreational, entertainment, housing, office, tools, and test equipment. This plan will address this "other equipment" as other support equipment (OSE). Detailed system/ subsystem descriptions will not be provided for OSE given the wide variety of this type of equipment.

Support of PME and site critical OSE will be addressed in Chapter 2, Maintenance, of this document and will be listed and addressed in the Votkinsk Maintenance Plan (VMP).

CHAPTER 1. INTEGRATED LOGISTIC SUPPORT MANAGEMENT

1.1 SYSTEM/SUBSYSTEM DESCRIPTION.

For the site located in Votkinsk, Russia, a set of Intermediate Range Nuclear Forces (INF) Treaty-specific equipment known as the On-Site Portal Monitoring System (OSPMS) has been in continuous operation since 1988. This equipment is comprised of two major systems, the CARGOSCAN System (CS) and the CONTINUOUS MONITORING System (CMS). Both of these major systems are one-of-a-kind, prototype designs. Following the ratification of the Strategic Arms Reduction Treaty (START) in 1995, the CMS has also been used to enforce the rights of the United States (US) on the START. The CS is limited to monitoring rights under the INF Treaty and is currently scheduled to be phased out in the year 2001.

1.1.1 CARGOSCAN System.

The CS is an automated radiographic imaging facility located at the VPMF used to x-ray image railcars containing ICBM missiles subject to INF treaty inspections. The main subsystems integrated with various computer control systems include the safety subsystem, an x-ray source subsystem, the imaging subsystem and the transport subsystem.

The x-ray source, imaging, and transport subsystems operate under computer control to generate an x-ray image of the contents of the railcar. During the scan process, the imaging subsystem performs the function of acquiring and assembling image data as well as controlling the operation of the x-ray source and the winch/motor assembly of the transport subsystem. The barcode computer reads the barcode rail mounted on the side of the railcar and provides electronic signals to the imaging subsystem to indicate train position and image length as well as controlling the operation of the x-ray shutter. Once an image is acquired the imaging subsystem is used to display and manipulate the x-ray image.

1.1.1.1 Safety Subsystem.

The safety subsystem is comprised of concrete shielding, a perimeter fence, gate and door interlocks, a page/party intercom system, a video surveillance system, and an x-ray shutter. The safety subsystem employs these security measures to ensure safe operation of the CS.

1.1.1.2 X-ray Source Subsystem.

The x-ray source subsystem is comprised of an x-ray head, a chiller unit, a modulator cabinet, and an operator console. The x-ray head generates and focuses the x-ray energy needed to produce x-ray images. The chiller unit provides the cooling for the x-ray head during x-ray generation. The modulator cabinet builds the energy burst needed to drive the x-ray head. The operator console is used to operate the x-ray source subsystem.

1.1.1.3 Imaging Subsystem.

The imaging subsystem is the nerve center of CS. All subsystems are integrated and controlled by this subsystem for the purposes of executing the scan process. The main components of the imaging subsystem include the control display unit (CDU), detector tower, and the data acquisition unit (DAU). The CDU is the user interface for the imaging subsystem. The processors and user terminal, integration hardware, video display monitors, and the operator control console make up the CDU. The main processors are Force rack mounted systems based on the VME bus architecture. The three processors share the same bus backplane running in a real-time multi-tasking multi-processing configuration. The

detector tower contains the detector array necessary to capture the resultant x-ray energy for image generation. The DAU is comprised of the front end hardware needed to support the data acquisition process.

1.1.1.4 Transport Subsystem.

The transport subsystem is comprised of a cable and harness assembly, winch and motor assembly, inverter drive panel, a laser source, a barcode rail assembly, and a barcode computer. The transport subsystem performs the job of moving the railcar during a scan process as well as determining the area of the railcar to be scanned via the barcode system. The barcode material is placed on the side of the railcar aligned with the start of scan mark. The barcode laser generates electronic pulses to the barcode computer as the barcode material passes before the barcode laser. The barcode computer, based on pulses from the barcode laser, determines when to send signals to turn on the x-ray source, open the x-ray shutter, and start data acquisition.

1.1.1.5 CargoScan Computer/Software Systems.

The CS is comprised of eight processors dedicated to hardware control, user interface, and data archival. Three of these processors are Force rack mounted computer systems based on the VME bus architecture sharing the same bus backplane running in a real-time multi-tasking multi-processing configuration dedicated to the imaging subsystem. Another four of these processors, again part of the imaging subsystem, are the digital signal processors (DSPs) dedicated to real-time data acquisition. The master Force processor runs under the UNIX operating system and manages all software execution. This processor directly runs the software tasks responsible for user interface, tape and disk storage, and print functions. The master processor controls the two other Force processors tied to the backplane. These processors are dedicated to running the subsystem hardware. These processors run under a real-time operating system known as PSOS. The real-time processors execute custom software routines to support data acquisition, subsystem hardware control, image file generation, and image display and manipulation functions. The four DSPs execute custom software routines to manipulate, correct and assemble the image data.

The remaining processor in the CS is the barcode processor. The barcode processor runs under Microsoft Disk Operating System (MS-DOS). This processor provides the operational environment for a counter card which is directly hardwired into the CS. This processor executes software to control the counter card for the purpose of establishing and controlling the timing sequence for the real-time operation of system hardware during the scan process.

1.1.2 CONTINUOUS MONITORING System.

The CMS functions as a fully integrated computer controlled system supporting continuous monitoring activities at the Votkinsk Portal in accordance with the INF and START treaties.

The CMS is a one-of-a-kind prototype design, developed by Sandia National Laboratories to support treaty verification activities at continuous monitoring sites established under the INF treaty. The system installed at the VPMF is comprised of a single data collection center (DCC). The DCC is constructed from four modular shelters, each 20ft x 8ft x 8ft, configured to function as an operations center for four U.S. treaty monitors. Additionally, the CMS is comprised of several subsystems integrated with the DCC. These subsystems are the data collection, traffic control, a dimensional infrared (IR) profiler, video surveillance,

communications, and facilities subsystems. These subsystems have been integrated to create a stand alone, processor controlled system.

Video cameras, road and rail induction loops, traffic lights, traffic gates, and the IR dimensional profiler are processor controlled via an operator control console to perform continuous monitoring and vehicle inspections. When a screening routine is initiated at the control console, the CMS processors work in tandem to execute gate and light operation, video capture and profile screening at the appropriate times to determine a pass or fail result as well as archival of the operation into a report including specific system activity, a digitized video image of the vehicle screened, and a dimensional profile of the vehicle.

1.1.2.1 Data Collection Subsystem.

All events that occur within the system are captured in real-time by the data collection subsystem to document daily portal activity and generate reports. The data collection subsystem is comprised of an integrated group of eight processors and two backup processors dedicated to hardware control, user interface, data collection, and report generation. Sensor information and state changes generated by system field elements are captured in real-time by the road and rail exit block processors (EBPs). Each EBP flags the central processor (CP) of hardware activity which is stored in the CP's database structure. The operator interface processor (OIP) displays current vehicle screening results, event processes, and general system conditions. As digitized video data is captured, the CP links this data with other subsystem events to generate system activity reports that can later be reviewed on the data review station (DRS).

1.1.2.2 Traffic Control Subsystem.

The U.S. monitors control vehicle traffic flow throw the Votkinsk portal via traffic lights and gates as well as invoking automated vehicle screening scenarios from the operator control panel.

The traffic control subsystem is comprised of the traffic control console, semaphore gates, traffic lights, and induction loops. Traffic lights and semaphore gates are installed along the rail line and roadway at the portal, allowing monitors in the DCC to control the movement of vehicular traffic into and out of the monitored facility. All field elements are controlled by the EBPs via the traffic control console. The operator can execute vehicle screening scenarios as well as controlling random road and rail traffic from this command position. The traffic control console indicates the status of all field elements as well as displaying real-time vehicle activity via the system's induction loops. Processor subsystems integrate the operation of the traffic control subsystem with that of the dimensional measuring and video-monitoring subsystems to provide automatic, semiautomatic and manual traffic control for vehicles as they enter and exit the monitored facility

1.1.2.3 Dimensional Measurement Subsystem.

The dimensional IR profiler subsystem is used on the road exit to capture and evaluate dimensional images of road traffic exiting the Votkinsk missile production plant. The road EBP executes the software to interface and control the dimensional IR profiler. When a vehicle passes through the dimensional IR profiler the EBP sends profile data and a pass/fail result to the CP which in turn flags the OIP to display the resultant data.

1.1.2.4 Video Subsystem.

The video subsystem provides live and digitized video to aid the continuous observation of the portal area.

The video subsystem is comprised of outdoor surveillance video cameras, road and rail video foredrops, video monitors, video switchers, and video digitizers. The video-monitoring subsystem is used to display, monitor, and record, as necessary, the movement of vehicles at the portal of a monitored facility. The subsystem provides video documentation of any vehicle exiting the facility, operator requested video documentation of the VPMF portal, and random scan documentation of activities within the DCC and the portal.

The outdoor video cameras are strategically placed to observe all traffic exiting the Votkinsk missile production plant. The video foredrops are used in the field of view of the road and rail camera shots as a length reference for vehicles captured in video images. The operator utilizes the video monitors and video switchers to select and view the live and digitized video.

1.1.2.5 Communication Subsystem.

This subsystem includes intra-site intercom and ultra high frequency (UHF) radio communications, telephone, and facsimile equipment. It provides communication between the monitoring team's headquarters, the portal, monitors' living quarters, and roving perimeter patrols. Communications between the site and the U.S. Embassy is provided through telephone and facsimile links over dedicated lines provided by the host nation.

1.1.2.6 Facilities Systems.

The facility make up of the CMS is comprised of the power subsystem, fire suppression/ detection subsystem, the kitchen and bathroom appliances, and the environmental control units. The power subsystem is concentrated in a stand alone generator skid comprised of a 250Kv diesel generator and an Onan power switch. The other significant component of the power subsystem is the uninterruptable power supply (UPS). The UPS provides uninterrupted power to all primary instruments in the CMS. In the event host power is lost, the UPS will continue to provide uninterrupted power until the diesel generator comes on line. The UPS ensures continuous operation of the primary CMS equipment to perform treaty monitoring activities.

1.2 LIST OF EQUIPMENT.

Since this plan addresses such a wide variety of PME and OSE, the best source listing for such equipment is the DD1662 report submitted to the USG Property Administrator per the Federal Acquisition Regulation (FAR). This report details the inventory of both PME and OSE located at the VPMF. The most current report dated 30 October 1996 provides a listing of all PME and OSE located at the VPMF, transferred from the On-Site Monitoring Program to the VPMP.

1.3 SUPPORT CONCEPT.

The PME and OSE located at the VPMF will be supported by a three-level maintenance concept. The three levels are Organizational (O-level), Intermediate (I-level) and Depot (D-level). Due to the unique prototype design of the PME, the majority of equipment will either

be repaired at the O-level or D-level. There are some repairs however that can and will be accomplished at the I-level. Figure 1 shows the flow of failed assemblies associated with this support concept.

1.3.1 Organizational Level Maintenance.

This level of support involves the site maintenance of systems by currently assigned maintenance personnel. The maintenance personnel will fault isolate to a failed lowest replaceable unit (LRU), remove and replace the failed LRU, and verify the fault correction by using diagnostics and system tests. An LRU may be an entire end item of equipment, an assembly, a circuit card, a subassembly, or a component. The failed LRU will be forwarded to the warehouse shop facility if repairable at the I-level or, if appropriate, directly to a designated D-level facility located off-site by way of established supply channels.

Both scheduled and unscheduled maintenance will be performed at the O-level. Scheduled maintenance requirements are of a preventive nature and are limited to visual inspections, adjustments, operational readiness testing and calibration.

Source, maintenance and recoverability (SM&R) coded spares will be maintained at the appropriate location to support O-level maintenance. In addition to spare LRUs and repair parts, expendable supplies for operation and maintenance of the systems are required. Supplies will be obtained through the normal supply channels established for the VPMP.

1.3.2 Intermediate Level Maintenance.

I-level maintenance will be performed primarily to remove and replace lower subassemblies not easily accessible on the end item at the O-level. Limited I-level maintenance will be performed to verify faulty assemblies and fault isolate to subassemblies using standard test equipment.

Isolation of the fault to a subassembly will be followed by I-level maintenance consisting of removal and replacement of the faulty subassembly using standard hand tools. Faulty subassemblies may be a circuit card, lower level subassemblies or a component. Faulty chassis mounted components will similarly be removed and replaced at the I-level. The assembly is then retested to verify repair. Given the prototype design of the PME, retesting of some assemblies may require the assembly to be installed in the end item for verification of the repair.

The I-level warehouse shop is limited to standard pieces of test equipment for trouble-shooting. No special test equipment was ever developed to support full I-level support capability. If appropriate, failed assemblies, subassemblies or components will be forwarded directly to a designated D-level facility located off-site by way of established supply channels.

1.3.3 Depot Level Maintenance.

This level of support involves two supply depots, one CONUS and one OCONUS. The supply depots are established and operated by HTSC. The CONUS supply depot is located at the HTSC Program Management Office (PMO). The OCONUS supply depot is located at the HTSC Field Office Europe (FOE), located in Hangar 80 on Rhein Main AFB, Frankfurt, Germany.

The supply depots will receive failed LRUs resulting from O-level or I-level maintenance at the VPMF. All failed LRUs will initially be returned to FOE from the VPMF. The depots will

forward the LRU to the appropriate vendor for repair. Failed LRUs that can be repaired at European vendors will be managed by FOE. Failed LRUs requiring repair at CONUS vendors will be returned to the PMO prior to being sent to CONUS vendors. CONUS vendor repairs will be managed by the PMO.

Due to the limited space available at FOE, an inventory of repair parts will not be maintained. The PMO does maintain an inventory of long term support spares acquired from previous closures of the development/test site located on Kirtland AFB, New Mexico. Prior to performing vendor repairs, FOE and PMO will coordinate to fill requirements with available inventory.

The supply depots will replenish repair parts, as needed to support O-level and I-level maintenance at the VPMF.

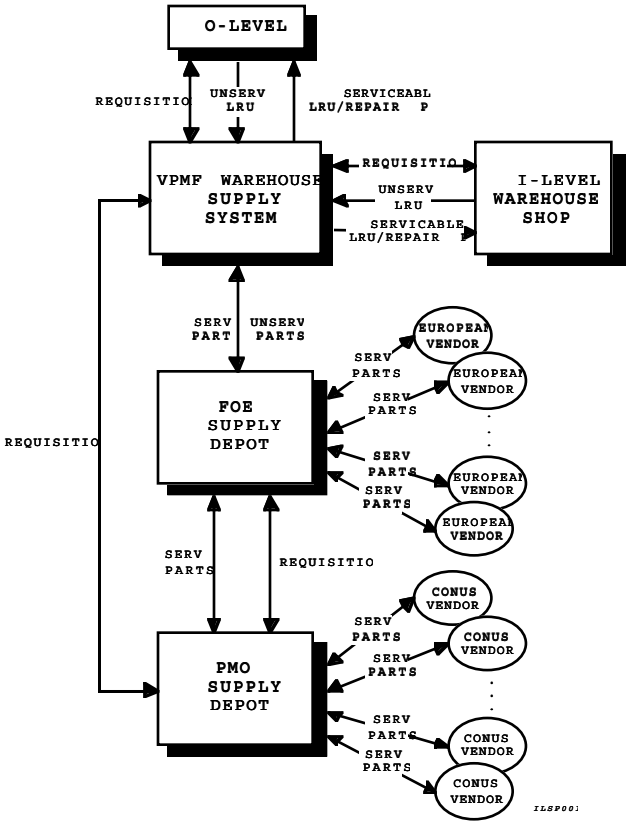

FIGURE 1. Support Concept

1.4 POINTS OF CONTACT.

Name	Title (Affiliation)	Telephone
LtCol Mike Krimmer	Contracting Officer Representative (OSIA)	703-810-4817
Capt Paul Scherer	Alternate Contracting Officer Representative (OSIA)	703-810-4821
Susan A. Klein	Contractor Program Manager (HTSC)	703-904-8042
Alan W. Gloe	Contractor ILS Manager (HTSC)	703-904-1924
Scott E. Yoder	Contractor Logistics Manager (HTSC)	703-904-1927

CHAPTER 2. MAINTENANCE

2.1 GENERAL.

The technical documentation package (TDP) provided to the USG by the development contractors for the CMS and the CS continues to be deficient in many areas. These deficiencies in the documentation have a significant impact on the supportability of the systems located at the VPMF. The development contractors never incorporated maintenance planning into a defined document as part of their contracts with the USG. Therefore, no maintenance planning prior to the system being put into an operational environment has ever been accomplished.

The USG made a decision in 1992 not to fund the effort required to update the TDP to the level required for adequate maintenance planning. Due to the magnitude in the scope of work and associated costs, updating the entire TDP at this point in the life cycle of the systems was not economically feasible. HTSC has proposed and plans to prepare a less detailed version of a functional maintenance plan document to be used on the VPMP based on available documentation. Costs associated with this effort have been a major concern of the USG, therefore, HTSC plans to utilize existing staff supplemented by temporary manpower to accomplish the task and keep costs to a minimum. Since the TDP is not complete, the experience and systems knowledge of HTSC personnel familiar with the equipment is required. The task of creating a maintenance plan could have been supported by personnel unfamiliar with the equipment had a proper drawing set been available. Ultimately, the incompleteness of the TDP will require repair and sparing decisions to be made at higher level assemblies. HTSC will not plan to repair or spare to some lower levels because the documentation required to support to these lower levels does not exist or is too costly to obtain.

Similar problems exist in trying to repair and spare the wide variety of OSE existing at the VPMF. Many commercial vendors refuse to supply the documentation needed to support lower level repair of commercial products. This will also drive HTSC's decisions to repair and spare commercial products to higher level assemblies.

2.2 MAINTENANCE CONCEPT.

The PME and OSE systems at the VPMF will have a three-level maintenance concept. The first level, Organizational (O-level), and the second level, Intermediate (I-level), will be performed on site by HTSC technicians and facility personnel. The third level, Depot (D-level), of maintenance will be performed by vendors off site.

Using available documentation, HTSC will create an indentured drawing/parts list to be used in the development of a Votkinsk Maintenance Plan (VMP). The VMP will provide a listing of PME and site critical OSE, indicating which items are to be repaired on-site by HTSC personnel and which items are to be repaired off-site by vendors.

All maintenance actions shall be documented in the appropriate logs and/or on the appropriate maintenance forms.

2.2.1 Organizational (O-level) Maintenance.

O-level maintenance will be performed by electronics and facility maintenance personnel. It will consist of corrective and preventive maintenance.

2.2.1.1 Corrective Maintenance.

This is any unscheduled action performed as a result of a component failure. Corrective maintenance actions are performed to restore the system(s) to an operational condition. Corrective maintenance includes:

a. Initiate on-equipment diagnostics/trouble-shooting.
b. Fault-isolate the system to a failed Lowest Replaceable Unit (LRU).
c. Remove and replace the failed LRU.
d.Verify that the failure has been corrected.

The LRU may be an entire item of equipment, a subassembly, or a piece part. On site maintenance personnel will forward the failed LRU directly to the I-level shop or to on site supply depending on the appropriate Source Maintenance & Recoverability (SM&R) code. Expendable piece parts will be returned to on site supply for disposition.

2.2.1.2 Preventive Maintenance (PM).

Maintenance personnel will perform a regular schedule of preventive maintenance in accordance with the VMP. The guidance provided in the VMP will be comprised of a combination of recommended maintenance from vendor manuals and HTSC experiences in operating this remote site since 1988. If the PM action requires the removal or replacement of parts, the action is scheduled with sufficient lead time to ensure that monitoring responsibilities are not affected. The removal and replacement of parts will further be scheduled and coordinated with low traffic periods whenever possible.

Periodic system tests will be scheduled and performed to verify equipment's functional performance as a part of preventive maintenance routines.

Following completion of each PM action, the appropriate maintenance documentation form is generated and the action is logged in the maintenance record control file. All PM actions are accomplished so as not to interfere with operational monitoring and training tasks.

2.2.2 Intermediate Level (I-level) Maintenance.

The I-level repair capability located on site is very limited. The I-level shop located in the warehouse is equipped with basic test equipment and tools. The PME systems located at the VPMF are one-of-a-kind prototype systems for which no special test equipment was ever planned or provided by the USG for testing lower level subassemblies. This repair area is primarily utilized to remove and replace failed lower level subassemblies that have been identified during operational testing at the system level. Both physical constraints and treaty driven repair times do not always allow removal and replacement of lower level subassemblies at the systems level. Failed LRUs are removed and replaced at the O-level to facilitate these constraints and to return the system to operational condition as soon as possible. These failed LRUs are then brought into the I-level shop to remove and replace lower level subassemblies as time permits, thus reducing the impact on operational readiness.

Since no test benches were designed to support any repair capability of the PME systems, most repaired LRUs must be reinstalled into the system to verify the fault has been corrected.

2.2.3 Depot (D-level) Maintenance.

D-level maintenance includes all the tasks performed at the intermediate level for assemblies and subassemblies. The majority of all D-level maintenance will be performed off site at established repair vendors. Some elements of the CS may require the deployment of specialists to effect repairs of a D-level nature on site. This is primarily due to the difficulties of removing large components of the system for return to vendor facilities. The political environment may also impact the removal of items from the VPMF for return to the repair vendors.

HTSC maintains subcontract agreements with Shelby Radiation Labs and Varian Radiation specifically for support of the X-ray subsystem associated with the CS. Should repairs of the X-ray subsystem be required that are beyond the capabilities of on site staff, specialists will be deployed from Shelby and/or Varian to perform D-level work on site.

Given the prototype design of the CMS, CS and the wide variety of OSE, other commercial vendors may be required to deploy to the site on short notice, one-of-kind type visits, to assist with D-level repairs of equipment on site. Normally, HTSC is capable of sustaining the systems on site and outside vendors other than Shelby would not be deployed to the site. Shelby will be utilized on a routine basis to perform preventive maintenance inspections and training for the X-ray subsystem.

2.2.4 Votkinsk Maintenance Plan (VMP).

The VMP is a controlled document that will be utilized by VPMP management, maintenance personnel and logistic support personnel for support of systems located at the VPMF. PME and OSE will be listed in the VMP with sufficient information to determine the repair level, repair location, and sparing requirements needed to sustain the systems located at the VPMF. Safety and skill levels of personnel, equipment availability, fault isolation techniques, ease of check/test and removal/replacement and economic considerations will be applied in the determination of maintenance levels authorized to restore the system/equipment to a fully operational condition after failure. Scheduled maintenance requirements will be established based on existing requirements for all applicable levels of maintenance.

There will be various sections of the VMP designed to facilitate both the jobs of the personnel performing maintenance on the systems and to facilitate the support roles associated with that maintenance. One section will be based on the Work Unit Code (WUC) structure, versus the true topdown-breakdown structure of systems. Figure 2 provides a sampling of the VMP based on WUC. This will facilitate the maintenance performed on the systems by maintenance personnel. Another section will be based on Stock Keeping Unit (SKU) number structure. Figure 3 provides a sampling of the VMP based on SKU. This will facilitate the logistical support of the systems to include recommended sparing levels of components.

VOTKINSK MAINTENANCE PLAN

Appendix A - Repair Capability

12 October 1999	*Sorted By WUC. Used Primarily for SM&R Code and PM Number*					
WUC	**VIC**	**Part Number**	**Drawing Nomenclature**	**PM No.**	**SM&R Code**	**SKU**
33120	3103010114	LH21256-12	IC, 256KB DRAM 120nS	n/a	PAOZZ	33002798000
33120	3103010117	ADV-000s	2nd Serial Port Option Kit	n/a	PAODD	33060430000
33120	3103010119	M3AEK-3418J-ND	Fixed Disk Drive Cable	n/a	PAOZZ	33050066000
33120	3103010121	M-MC13-DB9F	Mouse	n/a	PAODD	30003128101
33140	3103020000	9610	Tape Deck	M-01	PAODD	33005014101
33150	3103050000	87X9800	Printer, IBM Proprinter	n/a	PAODD	33002808101
33160	3103030000	2640/C9-2R	Monitor, Dual Kit	W-01	PAOOO	32060420000
33180	3103010120	1390653	Keyboard	n/a	PAODD	33002761101
33200	3102110000	S96465-000	Panel, Select	W-01	PAOOO	30005028100
33200	3102110100	554-2221	Switch, DPDT	n/a	PAOZZ	31004198000
33200	3102110200	DB-25P	Connector, Electrical	n/a	PAOZZ	26002580200
33200	3102120000	R09540-000	Panel, Communications	W-01	PAOOO	30005016100
33200	3102140000	R09514-000	Panel, Bulkhead	W-01	PAOOO	30005015100
33200	3102170000	R15181-000	Traffic Mode	W-01	PAOOO	30005023100
33200	3102170100	554-6221-411	Switch, DPDT	n/a	PAOZZ	31002664000
33200	3102170200	DB-25P	Connector, Electrical	n/a	PAOZZ	26002580200
33200	3102170300	1619	Connector, Electrical	n/a	PAOZZ	26002507200
33210	3102020000	2640/C9-2R	Monitor, Dual, Kit	W-01	PAOOO	32060420000
33220	3102010000	HJ6905	Monitor, Color	W-01	PAODD	33002797101
33230	3102030000	2640/C9-2R	Monitor, Dual, Kit	W-01	PAOOO	32060420000
33230	3102040000	2640/C9-2R	Monitor, Dual, Kit	W-01	PAOOO	32060420000
33240	3102130000	S96467-000	Panel, Horn	W-01	PAOOO	30005019100
33240	3102130100	DB-25P	Connector, Electrical	n/a	PAOZZ	26002580200
33240	3102130200	46-BR-5H-NRO	Light, LED Red	n/a	PAOZZ	33060424000
33240	3102130300	SC616CP-8733	Horn	n/a	PAOZZ	14004023000
33240	3102130400	AI-330	Horn	n/a	PAOZZ	33060425000
33240	3102130500	X20F24	Horn	n/a	PAOZZ	33060426000

FIGURE 2. Sample Of VMP Section Based On WUC

VOTKINSK MAINTENANCE PLAN
Appendix B - Supply Support

12 October 1999 *Sorted by SKU. Used for Determining Sparing.*

SKU No.	Part Numbers	Parts List Nomenclature	Sys Qty	Spare Qty	Rpr Time	Shelf Life	Service Life
42060220000	**RSC:** 78-595011	Power Supply, Solenoid	1 EA	1 EA	2 M	n/a	n/a
	MFR: 78-595011	Sornsen					
	VEND: 78-595011	Shelby Radiation Laboratories	**Ven.ID:**				
42060221000	**RSC:** 824948-06	Reference (50 Hz), Schematic	1 EA	0 EA	1 M	n/a	n/a
	MFR: 824948-06	Varian					
	VEND: 824948-06	Shelby Radiation Laboratories	**Ven.ID:**				
42060222000	**RSC:** 67-425996	Lamp, 28 VDC	1 EA	30 EA	1 M	n/a	n/a
	MFR: 387	General Electric					
	VEND: 67-425996	Shelby Radiation Laboratories	**Ven.ID:**				
42060223000	**RSC:** 71-229003	Switch, SPST, Start/Reset	1 EA	1 EA	1 M	n/a	n/a
	MFR: 71-229003	Varian					
	VEND: 71-229003	Shelby Radiation Laboratories	**Ven.ID:**				
42060224000	**RSC:** 72-569982	Relay, High Voltage, On	1 EA	1 EA	1 M	n/a	n/a
	MFR: 702LDOD93	Allen-Bradley					
	VEND: 72-569982	Shelby Radiation Laboratories	**Ven.ID:**				
42060225000	**RSC:** 72-125987	Relay, DPDT, 24V	2 EA	2 EA	1 M	n/a	n/a
	MFR: PR11DY24V	Potter And Brumfield Inc, A					
	VEND: 72-125987	Shelby Radiation Laboratories	**Ven.ID:**				
42060226000	**RSC:** 55-700156	Circuit Breaker, 40 Amperes	1 EA	1 EA	1 M	n/a	n/a
	MFR: TEB13230	General Electric					
	VEND: 55-700156	Shelby Radiation Laboratories	**Ven.ID:**				
42060227000	**RSC:** 71-639865	Circuit Breaker, 25 Amperes	1 EA	1 EA	1 M	n/a	n/a
	MFR: THQC1125 WL	General Electric					
	VEND: 71-639865	Shelby Radiation Laboratories	**Ven.ID:**				
42060228000	**RSC:** 72-125987	Circuit Breaker, 20 Amperes	1 EA	1 EA	1 M	n/a	n/a
	MFR: THQC1120 WL	General Electric					
	VEND: 71-639816	Shelby Radiation Laboratories	**Ven.ID:**				
42060229000	**RSC:** 55-700154	Circuit Breaker, 15 Amperes	1 EA	1 EA	1 M	n/a	n/a
	MFR: TED134015 WL	General Electric					
	VEND: 55-700154	Shelby Radiation Laboratories	**Ven.ID:**				
42060230000	**RSC:** 72-569934	Relay, Heater Overload, Reset	1 Set	1 Set	1 M	n/a	n/a
	MFR: N27	Allen-Bradley					
	VEND: 72-569934	Shelby Radiation Laboratories	**Ven.ID:**				
42060231000	**RSC:** 72-569920	Relay, Over Load	1 EA	1 EA	1 M	n/a	n/a
	MFR: 815-80V 16	Allen-Bradley					
	VEND: 72-569920	Shelby Radiation Laboratories	**Ven.ID:**				
42060235000	**RSC:** 72-125992	Relay, DPDT, 115V Coil	1 EA	1 EA	1 M	n/a	n/a
	MFR: 72-125992	Shelby Radiation Laboratories					
	VEND: 72-125992	Shelby Radiation Laboratories	**Ven.ID:**				

FIGURE 3. Sample Of VMP Section Based On SKU

2.2.4.1 Work Unit Code (WUC).

The WUC will provide the maintenance personnel a breakdown of the systems functionality versus a true topdown-breakdown structure. Listing the equipment by WUC will facilitate the repair of systems by the maintenance personnel. The WUC lists the equipment functionally where as the Votkinsk Indenture Code (VIC) lists the equipment by physical configuration. For example, a video monitor installed in the traffic control console would be grouped by WUC with the video subsystem, but would be grouped with the traffic control subsystem when identified by the VIC.

2.2.4.2 Votkinsk Indenture Code (VIC).

The VIC provides a topdown-breakdown of the system. A complete listing of the entire system will not be provided in the VMP. The listings will only provide the topdown-breakdown for those components of the system that HTSC is planning to service and repair.

2.2.4.3 Source Maintenance & Recoverability (SM&R) Codes.

SM&R codes will be established for the items listed in the VMP. This will provide the guidance required to advise maintenance personnel to what levels they are allowed to repair to. The SM&R codes also provide guidance to logistics personnel on whether the items listed in the VMP are repaired on site or need to be sent off site for vendor repair.

The standard U.S. Military SM&R code as detailed in Figure 4 will be utilized on the VPMP.

SOURCE				MAINTENANCE				RECOVERABILITY	
				USE		REPAIR			
1st Position		2nd Position		3rd Position		4th Position		5th Position	
P	Procure	A	Replenish	O	Replace or use at O-level	Z	No Repair (Consumable)	Z	Nonrepairable. Condemn at level in 3rd position.
		B	Insurance					A	Special handling for disposal (consumable).
		C	Cure-Dated						
		D	Initial	F H G	Replace or use at I-level	B	Recondition by adjustment, calibration lubrication, plating, etc.	O H	Repairable item. Condemn at O-level.
		E	End Item GSE/Stocked						
		F	GSE/Not Stocked						
K	Repair Kit Component	F	ORG/IMA					F G	Repairable item. Condemn at I-level.
		D	Depot	L	Replace or use at Special I-level	O	Repair at O-level		
		B	Both Kits						
M A	Manufacuture Assemble	O	ORG	D	Replace or use at Depot	F H G	Repair at I-level	S	Repairable item.
		F	Afloat						
		H	Ashore						
		G	Both						
		D	Depot					(L)	Condemn at Specialized I-level.
X	Misc	A	Request NHA			L	Repair at Special I-level		
		B	Obtain From Salvage or One Time Buy	Z	Depot not REQD this APPLC	D	Repair at Depot or Vendor	D	Repair at Depot or Vendor.
		C	Diagrams-Schematics Install DWGS						

FIGURE 4. Source Maintenance & Recoverability Codes

2.2.4.4 Stock Keeping Unit (SKU).

The section of the VMP based on SKU will be utilized by logistics management to facilitate the reordering and sparing process. The SKU is a unique identifier used in the inventory management system to identify a specific component

2.2.4.5 HTSC, Manufacturer, and Vendor Part Numbers.

To support resupply of inventory items, the section based on SKU will also relate up to three different part numbers to the SKU, if necessary. The three different part numbers may be required for HTSC to be capable of identifying items within the technical data package, determine original equipment manufacturer (OEM) of equipment, and determine a supplier of such equipment. The "HTSC" part number field will be the controlling number for configuration purposes. This number may be an OEM number or one that HTSC has created. The "MAN" part number will be the OEM number. The "VEN" number is usually a catalog type number that a specific supplier uses to identify an item in their inventory system.

2.2.4.6 System Quantity and Sparing Recommendations.

The SKU section of the VMP will also identify the total number of times a particular item is used in systems at the VPMF. Based on this information, past history data and HTSC's experience of maintaining the VPMF, recommended sparing levels will be established. Necessary adjustments to these recommended sparing levels will be made annually based on actual usage date and failure rates.

The initial sparing levels indicated in the VMP will be established based on an abbreviated Logistic Support Analysis (LSA). The original sparing philosophy established by the USG was to provide and maintain 150% sparing levels on all PME sent to the VPMF. Since no maintenance plan was ever established by the original providers of equipment to the VPMF, HTSC has maintained this original sparing philosophy over the years. With the creation of the VMP, HTSC will be able to adjust this 150% sparing philosophy to levels that better reflect the true maintenance requirements of the VPMF.

2.2.4.7 Repair/Replenish Turn-Around-Time.

The "RPR TIME", is an estimated replenishment time for this item. Replenishment may be as a result of repairing an item off site and/or replacing the item. It is provided in the SKU section to assist the logistics personnel in planning for reorders and establishment of initial spares. Due to the long supply lines associated with moving items to the VPMF, the estimated RPR TIME unit values will normally be given in months.

2.2.4.8 Vendor Identification.

A vendor code that will be utilized during the procurement process is also identified in the SKU section of the VMP. The vendor code will relate an item to the vendor table used in the purchase order database system. This will allow the buyer to quickly identify a source for an item and expedite the order keeping turn-around-time from receipt of order to delivery to the VPMF at a minimum.

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CHAPTER 3. TEST AND EVALUATION

Per the requirements of the contract, this chapter has been excluded from the ILSP.

CHAPTER 4. SUPPLY SUPPORT AND PROVISIONING

4.1 GENERAL.

Acquisition of site operation and support equipment will be accomplished at two locations, the PMO and FOE. The majority this equipment will be procured out of FOE to meet European voltage and frequency requirements. All supply support requirements for the VPMF will be documented on either Material Provisioning Requests (MPRs) or Request For Materials (RFMs) with the proper authorizing signatures prior to procurement.

MacAMRS will be used to maintain the accountability of USG assets. MacAMRS will be used to maintain auditable stock and balance records of USG inventories at all three program locations (VPMF, PMO, and FOE) as well as provide historical usage data. The historical usage data will be utilized to forecast future spares requirements and associated budgets. Each program location will maintain its own individual stock balance records of assets on-hand. MacAMRS will also be utilized to generate receiving, issuance, movement, and disposition documentation to provide auditable USG property accountability records.

Accountability of USG assets in transition between sites will be accomplished by documenting the movement of USG assets on a DD Form 1149 or DD Form 1348. Assets will be shipped by traceable means between the sites. On movement of assets utilizing MILAIR, the DD Form 1149 or DD Form 1348 will provide a Tracking Control Number (TCN). On movement of assets utilizing US Express Mail, a TCN will be assigned on the DD Form 1149 or DD Form 1348 that correlates to the Express Mail tracking number.

4.2 APPLICABLE DOCUMENTS.

The primary management tool that will be utilized by VPMP supply support personnel will be the VMP. A section of this controlled document will provide guidance for maintenance and logistics personnel on the location of repair for an item, to what level an items is repaired, and recommended stock levels for spares to support equipment at the VPMF.

Acquisition of replacement spares, repair parts, supplies and consumables will be in accordance with the requirements of the FAR and Defense Federal Acquisition Regulation (DFAR). Other applicable documents will include the HTSC Procurement Manual, Hughes Aircraft Company Procurement Policies, and HTSC VPMP Instructions.

4.3 STOCK MANAGEMENT/INVENTORY.

The Site Manager and the ILS Manager will be responsible for spares management on-site. There will be two HTSC logisticians acting on behalf of the Site Manager to perform the day-to-day tasks associated with management of the on-site assets. The Site Manager will be responsible for the management of existing assets located at the VPMF to support on-going operations. The ILS Manager will be responsible to ensure adequate sparing is provided on new equipment or items added to the site as a result of engineering changes, modifications, introduction of new equipment to the site, etc. In either case, the Site Manager and the ILS Manager will work together to ensure proper sparing and supplies are adequately stocked at the VPMF to support on-going operations and future operations.

The Site Manager and two logisticians will interface indirectly with the ILS Manager and his staff to address all support issues for the VPMF. Figure 6 depicts the functional organization used for spares management on the VPMP. Both the Site Manager and the ILS Manager will report directly to the VPMP Program Manager.

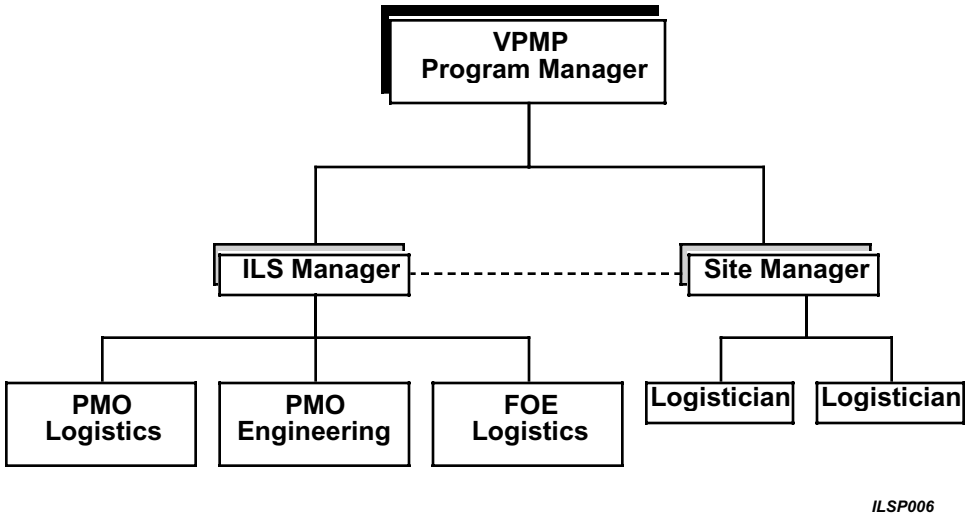

FIGURE 5. Organizational Responsibilities For Spares Management

4.3.1 MacAMRS Inventory System.

A Macintosh version of HTSC's Automated Maintenance & Reporting System (MacAMRS) will be the tool used on the VPMP for inventory control at the VPMF, FOE and PMO.

This inventory management system will provide the necessary tools to maintain and track stock levels in support activities at the VPMF, PMO, and FOE. MacAMRS will also be utilized to track order status, and to provide usage data and historical data for future spares forecasting. Future enhancements to MacAMRS will incorporate the procurement process, increasing the efficiency between the end user support requirements, the acquisition process, and HTSC finance requirements. These future enhancements will also have immediate impact on support of the systems at the VPMF. Increasing efficiency in the procurement process will allow faster response time to site requirements and will result in the reduction of repair turnaround times increasing the availability of spares on-site.

4.3.2 Logistic Data Management Network.

HTSC will be incorporating new methods to handle the processes of managing data associated with the efforts of placing orders, statusing orders, receiving, and shipping. HTSC will incorporate a network structure that takes advantage of the latest technology advancements and incorporate the use of the "InterNet". This will allow the PMO to host databases that can be access by FOE and the PMO warehouse. The PMO and FOE are the two main supply hubs for the VPMF. The ability to be able to access the same databases significantly reduces data input inconsistencies and will provide for more efficient use of resources to support the VPMF. Figure 6 shows the functional diagram of the network. The VPMF is still an isolated entity due to the restrictions on InterNet access. HTSC will position itself to be capable of adding the VPMF to the network via InterNet connections should the restrictions at the VPMF be lifted. As required, soft copies of data are currently hand carried to and from the VPMF on rotations and then reentered into respective computer systems.

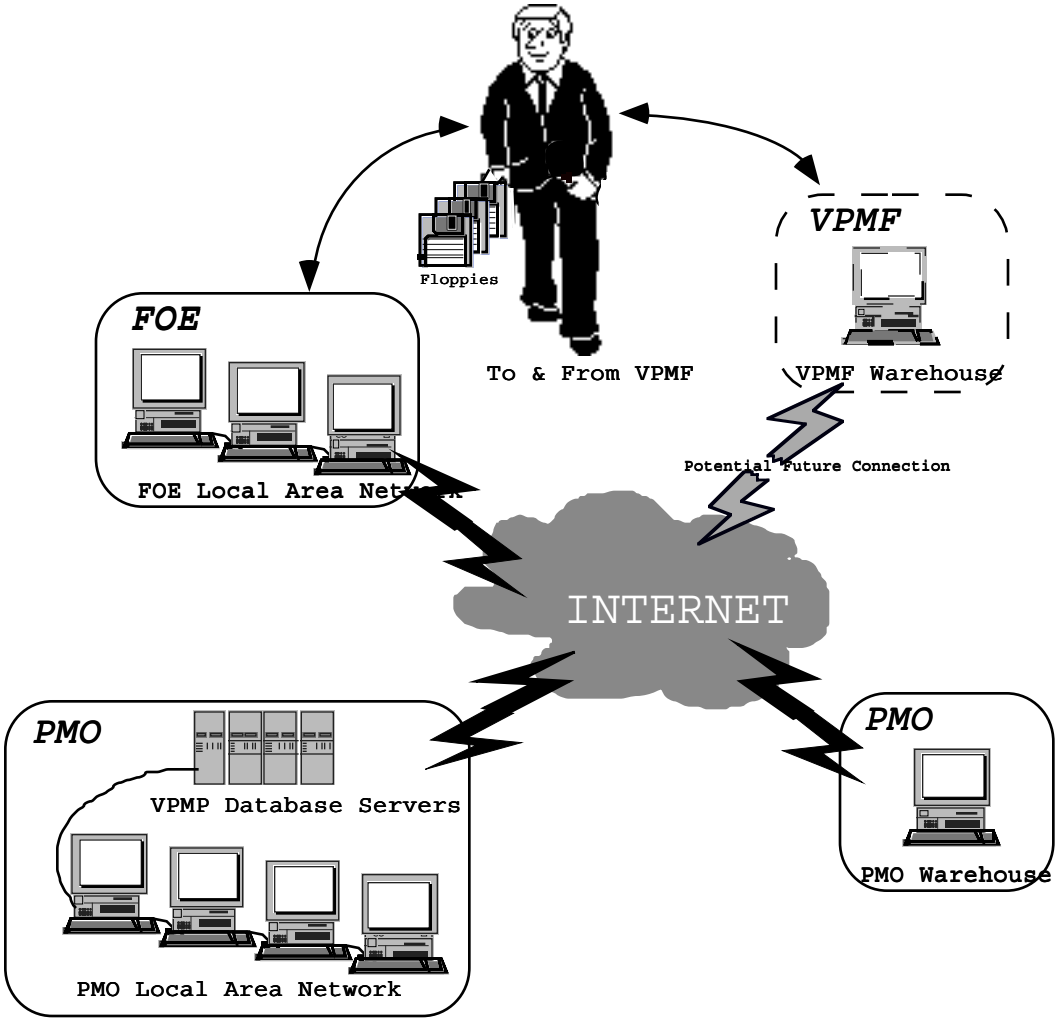

FIGURE 6. Functional Diagram Of Logistics Data Management Network

4.4 PROVISIONING.

All material and spare parts required to support operations at the PMO and the VPMF are to be procured by HTSC. The supply depots are the two locations that procurement support will take place.

Typically, material requirements are initiated by the site using the Material Provisioning Request (MPR) form. The US Site Commander and HTSC Site Manager must sign off all MPRs. Each line item is tracked through ordering, receipt, and shipment to the site. The MPR order status report provides the logistics organization with visibility of: (a) the requirement; (b) the responsible acquisition activity; (c) the date the acquisition activity ordered the item; (d) the date the item was received at the acquisition organization and; (e) back-order status of the requisition. Material requirements at the PMO and FOE are documented on the Request For Material (RFM) form. The ILS Manager or HTSC Program Manager must sign off all RFMs. All MPRs and RFMs are routed through the PMO for tracking and budgetary approval.

The Logistics Manager reviews all requirements and coordinates procurement actions/ assignments between the two supply depots.

4.5 SUPPORT DETAIL FOR FOLLOW-ON SUPPORT.

HTSC is the organization responsible for follow-on support of systems installed at the VPMF. The duration of this support will continue through the term of the existing contract between OSIA and HTSC. The duration of the existing contract is through September 2001.

4.6 SUPPLY SUPPORT DURING CONTRACTOR O&M PERIOD.

HTSC is the organization responsible for supply support during the Operation & Maintenance (O&M) phase of the equipment life cycle at the VPMF. All activities performed under this contract are the responsibility of the HTSC VPMP Program Manager. The name and address of the HTSC Program Manager is provided below:

Susan A. Klein

Hughes Technical Services Company

13873 Park Center Road, Suite 172

Herndon, VA 22071

Phone Number: (703)904-8042

HTSC will be responsible to provide and/or maintain all spare parts and supplies required to support the VPMF with the exception of spare parts or supplies required to support the Russian provided housing. Under the provisions of the treaty, the Russians are responsible to support and/or supply items associated with the Russian provided housing. HTSC will support any activity to provide the Russians with spare parts or supplies to sustain the housing located at the VPMF when directed by OSIA to do so. All coordination required between the US and Russia on this matter will be the responsibility of OSIA. HTSC will act in a support role and assist OSIA whenever required to facilitate this coordination.

4.7 RECORDING/STORAGE MEDIA MANAGEMENT.

The only media utilized for storage of data are the magnetic tapes used on CS for archival of missile images and magnetic tapes utilized on the CMS for archival of portal activity. Due to restrictions of the treaties, both these media are required to be kept at the VPMF. HTSC will not ship or remove these tapes from the VPMF until directed to do so by OSIA.

4.7.1 CS Image Tapes.

All tapes with missile image data will be stored in the VPMF warehouse under dual lock per agreements with the Russians. Tapes are logged by declaration number and will be stored accordingly. The missile image data tapes are not reused.

4.7.2 CMS Portal Activity Tapes.

There are fourteen tapes utilized in the DCC to archive CMS activity. Tapes will be changed once every twelve hour shift and will be routinely replaced when they show signs of wear. Unless there is an ambiguity documented on a tape, the tapes will be cycled back into use after one week. Therefore, at any given time, there will be one week of archived data available on the tapes.

In the event of an ambiguity, the subject tape will be provided to OSIA. OSIA will be responsible to provide the tape to whatever parties require the tape for evaluation of the ambiguity.

4.8 SPECIAL TOOLS AND TEST EQUIPMENT.

HTSC will be the responsible organization for requirements associated with special tools and test equipment required on the VPMP. Currently, there are no special tools or test equipment requirements on the VPMP.

4.9 DEPOT TEST EQUIPMENT.

There currently is no requirement on the VPMP for depot test equipment.

4.10 MISSION EXPENDABLE SUPPLIES.

The DD1662 report submitted to the USG Property Administrator per the Federal Acquisition Regulation (FAR) provides information pertaining to mission expendable supplies. This report details the inventory of both PME and OSE located at the VPMF. The most current report dated 30 October 1996 provides a listing of all PME and OSE located at the VPMF, transferred from the On-Site Monitoring Program to the VPMP

HTSC is responsible for providing all the necessary expendable supplies required to support operations on the VPMP. These supplies are procured through the normal provisioning process discussed in paragraph 4.4.

4.11 DISPOSITION OF NONSERVICEABLE, OBSOLETE, SALVAGED, OR EXCESS EQUIPMENT.

Detailed procedures for disposition of property on the VPMP will be in accordance with the FAR and will be included in the HTSC Property Procedures submitted to the USG auditing agency for approval. HTSC will dispose of property from three locations, PMO, VPMF and FOE. All property will be documented on DD 1149 or DD 1348 forms when dispositioned. Property identified as excess on the VPMP may occasionally be transitioned directly to other USG agencies. Prior coordination and authorization for transition directly to other USG agencies will be coordinated with OSIA.

4.11.1 Disposition Of Property From The PMO.

All property identified for disposition will be processed on DD 1428 forms and submitted to the USG Property Administrator for disposition instructions per the requirements of the FAR.

4.11.2 Disposition Of Property From The VPMF.

Occasionally, property will be disposed of at the VPMF by turning the subject property over to the Russians. Approval will be obtained from OSIA, the USG Property Administrator and US Embassy Property Administration prior to any property being released to the Russians. Property not identified for turnover to the Russians will be back hauled to FOE for disposition.

4.11.3 Disposition Of Property From FOE.

All property identified for disposition at FOE will be documented on DD 1348 forms and will be released to the Defense Reutilization Management Organization (DRMO) located on Rhein Main AFB.

4.12 EQUIPMENT ACCOUNTABILITY.

Detailed procedures for accountability of USG property on the VPMP will be in accordance with the FAR and will be included in the HTSC Property Procedures submitted to the USG auditing agency for approval.

HTSC will be accountable for all USG property listed in the HTSC inventory for the VPMP. The HTSC inventory will be kept in accordance with the requirements of the FAR and is subject to annual audits performed by the USG. The USG property in the custody of HTSC for the VPMP will be reported annually in the DD 1662 report.

CHAPTER 5. PACKAGING, HANDLING, STORAGE, AND TRANSPORTATION

5.1 PURPOSE.

This chapter describes the transportation approach to be used for sustaining the VPMF site and personnel. The approach for transporting food, consumables, spares and repaired items to the VPMF, and the removal from the site of items requiring repair/disposition is discussed.

5.2 ORGANIZATIONAL RESPONSIBILITIES.

For shipments originating from the PMO and FOE, it is HTSC's responsibility to package, handle, store, and prepare the documentation required to support shipments to the VPMF with the exception of hazardous material. The USG is responsible to finalize the packaging and complete the hazardous certification documentation required to accompany any shipments from the PMO or FOE. The USG is also currently responsible for the transportation requirements necessary for the twice a year cargo flights to support the VPMF.

The USG is responsible to provide all official notification and documentation of shipments to the host nation. HTSC supports the USG in this role by preparing and translating all documentation per the requirements of the INF Treaty and the START.

All official documentation for shipments will be coordinated through the HTSC Logistics Manager located at the PMO, to either the Contracting Officer Representative (OSIA) or the Alternate Contracting Officer Representative (OSIA).

5.3 MATERIAL MOVEMENT PLANS.

Movement of material between any locations operating under the VPMP or transfer of property to other agencies will be documented on the standard DOD forms, DD Form 1149 for multiple items or DD Form 1348 for single items.

Currently, HTSC makes use of MILAIR on several legs of transportation for items being sent to and from the VPMF. FOE is the staging point for all shipments destined for the VPMF. Figure 5 depicts the various modes and paths of shipment available to HTSC to ensure that items are delivered to the VPMF as expeditiously as possible.

A general overview of the material movement plans are provided in this document. More detailed procedures will be documented in the VPMP Property Procedures, HTSC Program Instructions and the Rotation/Cargo Checklist. These other procedures will specifically address such items as documentation format, schedules, notifications, etc.

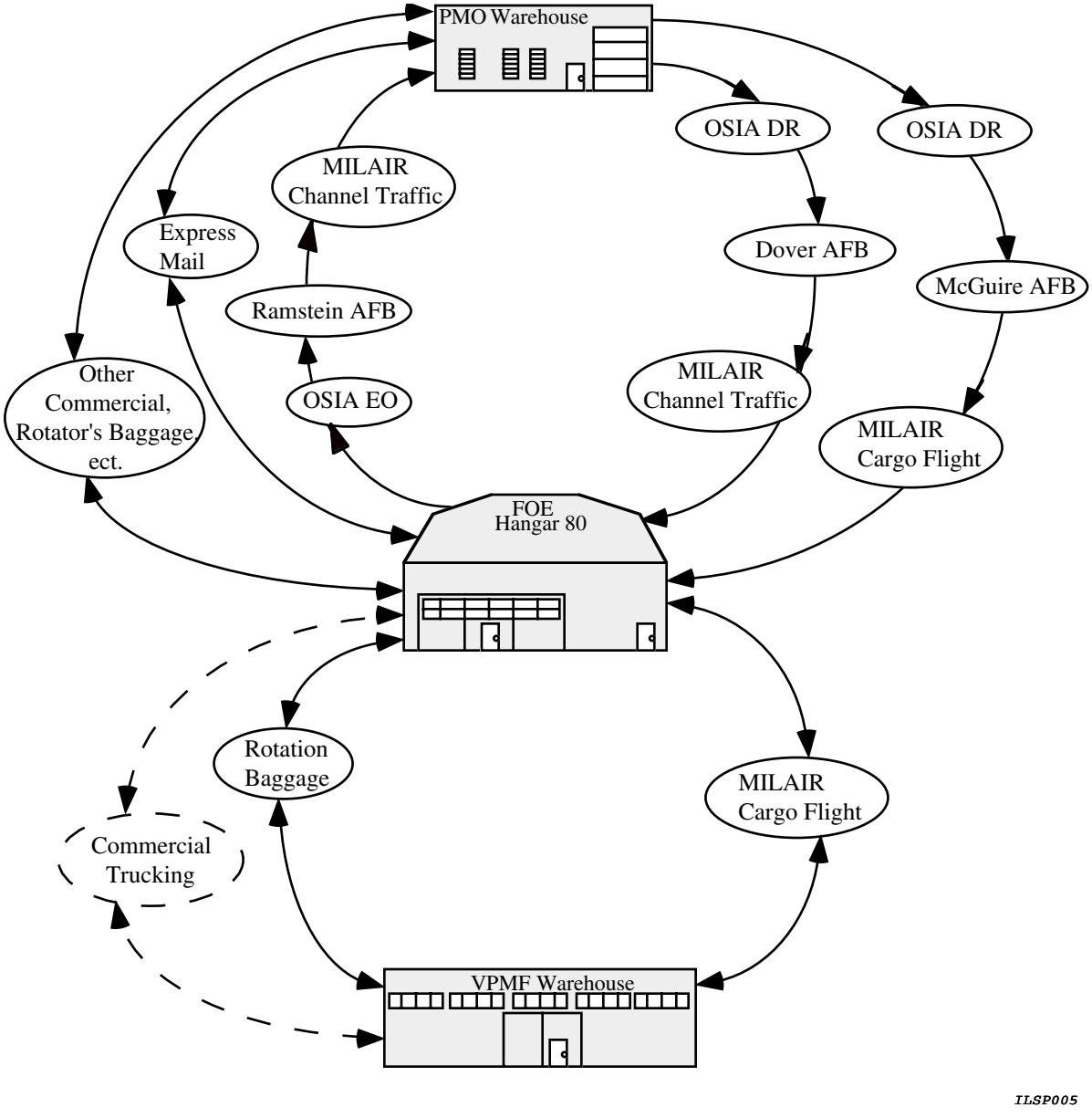

FIGURE 7. Shipment Modes And Paths Used On VPMP.

5.3.1 MILAIR Cargo Shipments.

Currently, HTSC supports biannual cargo shipments to the VPMF. Material will be moved from the PMO warehouse to FOE where it will be staged for the cargo flight into the VPMF. Following a packaging and documentation effort at the PMO warehouse, OSIA Directorate of Resource Management (DR) personnel will palletize the cargo at the PMO warehouse in preparation for transport on a C-141 aircraft. On approximately four days prior to the date that the cargo flight is scheduled to arrive at the airport nearest the VPMF, DR personnel will pick up the cargo at the PMO warehouse and transport it to the cargo aircraft, normally located at McGuire AFB.

The cargo aircraft will fly to Rhein Main AFB where OSIA European Operations (EO) personnel will combine the cargo with that already staged by FOE. The aircraft then continues on to the Izhevsk, Russia airport where personnel from the VPMF will assist in the off-load and transport of cargo the final leg to the VPMF. The Russians will provide trucks for the final leg between the Izhevsk airport and the VPMF. Any cargo scheduled to be back hauled to FOE will be brought to the aircraft by the Russian trucks.

5.3.2 MILAIR Channel Traffic.

This mode of transportation will be used as a means to move material both directions between the PMO warehouse and the FOE. HTSC will package and document material for transport on DD Form 1149s prior to turnover of the material to DR and/or EO personnel for shipment.

Material destined for FOE will be picked up by DR personnel at the PMO warehouse and trucked to Dover AFB. From Dover AFB, the material is added to any channel traffic headed for the European Theatre. The material normally travels from Dover AFB, Delaware; to Ramstein AFB, Germany; to Hangar 80 at Rhein Main AFB, Germany; where it is turned over to HTSC FOE personnel. This mode of transportation will be utilized for moving material from the PMO to FOE in preparation for a cargo flights when time permits. Normally, two-three weeks of transit time is required to move assets from the PMO to FOE using this mode of transportation. This allows for movement of material to FOE procured early in the replenishment cycle by PMO, for a particular cargo flight. Staging as much cargo at FOE as possible, as early as possible, facilitates the weight and cube estimates required for making aircraft sortie decisions.

All material that can not travel channel traffic from the PMO to FOE due to schedule restraints will be place on the cargo aircraft as discussed in 5.3.1.

FOE will make use of channel traffic when returning items to the PMO for CONUS repair actions. FOE will deliver material destined for the PMO to EO personnel at Rhein Main AFB. EO personnel then take the necessary steps to turn the material over to MILAIR channel traffic. Normally, the material will be trucked from Rhein Main AFB to Ramstein AFB. From Ramstein AFB, the material will be flown to Dover AFB. From Dover AFB the material will be trucked to the PMO warehouse.

5.3.3 Express Mail.

HTSC utilizes the U.S. Postal Service's Express Mail to move small items both directions between FOE and the PMO when schedule necessitates quick movement of material. Using Express Mail to ship items to an APO box located at Rhein Main AFB also eliminates delays due to customs, inherent with the use of other carriers such as Federal Express and United Parcel Service.

5.3.4 Commercial Transportation.

Depending on the size of an item and the schedule requirements, HTSC will also occasionally make use of commercial carriers such as Federal Express, United Parcel Service, Burlington Air Express, etc., to move material between the PMO and FOE.

5.3.5 Rotation Personnel - Excess Baggage.

HTSC will also make use of rotation personnel traveling from the PMO to the VPMF and rotation personnel returning from R&R to the VPMF. Small items that are of a high priority will be hand carried by rotators. Other than the twice a year cargo shipments, the rotations are the only other opportunity to forward material to the VPMF.

The material will be checked as excess baggage and assigned to HTSC personnel whenever possible. Occasionally, excess baggage will be assigned to OSIA duty officers if the volume of excess baggage is significant. In all cases, HTSC will work to avoid assigning excess baggage to three week visitors.

5.3.6 Commercial Trucking.

Commercial trucking of cargo between the FOE and the VPMF is currently being negotiated between the USG and the Russians. Plans to begin using this mode of transportation are being formulated for 1997.

HTSC plans to utilize a commercial trucking firm, World Trade Transport, to move material from FOE directly to the VPMF. This commercial trucking firm will provide trucks that are equipped with satellite tracking capability. This will allow HTSC to track the progress of a shipment from FOE to the VPMF.

All efforts that make use of commercial trucking will be similar to those currently utilized to support cargo flights. The only major difference will be the leg between FOE and the VPMF.

If negotiations are successful, this mode of transportation could effectively eliminate the requirement for MILAIR cargo flights. However, the use of MILAIR cargo flights will remain an option should circumstances warrant its use.

5.4 SPECIAL HANDLING.

HTSC will coordinate and advise OSIA IOM, OSIA EO and OSIA DR of any special handling requirements well in advance of any shipment containing material requiring such special handling.

Host nation notification documentation is required for cargo shipments. This documentation provides the host nation with the size of the shipment (pallets, weight, and cube) and assists them in providing appropriate handling equipment and appropriate personnel to inspect the cargo. The only standing requirement for special handling equipment is at the Izhevsk, Russia airport. For any cargo flight arriving at the Izhevsk airport, the US must rely on the Russians to provide a forklift capable of off loading the aircraft and providing trucks to deliver the cargo to the warehouse at the VPMF. This requirements is a standing requirement that requires proper notification between the US and Russian governments. OSIA IOM provides this notification and HTSC assumes this requirement will continue to be met for all MILAIR cargo shipments.

5.5 PRESERVATION AND PACKAGING.

Packaging will be performed in accordance with commercial standards. To reduce material costs and to expedite the packaging process, commercial containers and reusable crates will be used to the greatest extent possible for packaging non-perishable foods and day-to-day supplies. Thermal containers will be used for packaging frozen or refrigerated items. Containers are of such a size to ensure they are usable on both U.S. Government and host nation provided transport.

Packaging for hazardous materials is designed to meet the requirements of Title 49 of the Code of Federal Regulations; the Dangerous Goods Regulations, International Air Transport Association (IATA); and the Hazardous Materials for Military Air Shipments (AFR 71-4). Requirements are based on the characteristics of the item and the mode of transportation.

When necessary, OSIA DR personnel will provide packaging and certification for hazardous material being shipped MILAIR from the PMO to FOE. When necessary, OSIA EO personnel will provide packaging and certification for hazardous material being shipped MILAIR from the FOE to either the VPMF or PMO. Packaging of hazardous material to be put on back hauls from the VPMF to FOE will be performed by HTSC. HTSC logistics personnel at the VPMF will be required to remove the hazardous material forms from all hazardous materials received at the VPMF site and maintain a history file should any of these same items need to be shipped from the VPMF site in the future. Certification of this hazardous material will be coordinated with FOE in order for OSIA EO personnel to prepare the required documents that will be brought into the VPMF prior to the hazardous material being placed on the back haul aircraft.

5.6 TRANSPORTATION REQUIREMENTS.

All packaging done by HTSC will be performed assuming items will sent to the VPMF by C-141 aircraft. HTSC will assist OSIA EO and OSIA DR personnel in the palletization of cargo for C-141 aircraft. Current guidelines for pallet weight, size and aircraft load assumptions can be found in the Rotation Manager's Cargo Checklist.

Future shipments by commercial trucking will be limited by the commercial requirements imposed on the trucking firms. Currently this is limited to twenty tons and eighty cube for each truck.

5.7 TECHNICAL DATA.

HTSC will assist OSIA EO and DR personnel in the packaging of hazardous material by obtaining the Material Safety Data Sheets for any hazardous materials HTSC plans to ship by MILAIR. There should be no other documents, drawings or plans required for shipment of items to the VPMF in support of transportation or handling requirements.

5.8 MARKING.

All items contained in shipments to the VPMF will be identified and listed on a master inventory list to meet the requirements of the INF Treaty and START. The containers that items are placed in will also be identified on the master inventory. This will allow for ease of identification during host nation customs inspections normally performed at the VPMF warehouse.

In addition, all containers will be marked with weight, cube, dimensions, and destination to facilitate the OSIA EO and OSIA DR personnel in assembling pallets for load planning.

It will be the responsibility of OSIA EO and/or OSIA DR personnel to ensure all hazardous material is properly marked for shipment on MILAIR.

5.9 DAMAGE OR LOSS

Requirements for reporting and damaged or lost items during shipments will be detailed in the HTSC Property Procedures. The Property Procedures will be in accordance with the requirements of the Federal Acquisition Regulation (FAR). Appropriate Damage, Loss, Destruction documents will be prepared and submitted through the USG Property Administrator for this contract.

CHAPTER 6. TECHNICAL DATA AND DATA MANAGEMENT

Per the requirements of the contract, the ILSP has been tailored to exclude this chapter.

CHAPTER 7. CONFIGURATION MANAGEMENT

Per the requirements of the contract, the ILSP has been tailored to exclude this chapter.

CHAPTER 8. INSTALLATION AND FACILITIES.

8.1 GENERAL.

All integration of PME will be accomplished in accordance with the Engineering Change Proposal (ECP) process. The ECP process is detailed in the Configuration Management Plan (CDRL A011).

The VMP will be used to control and implement the addition of new site critical OSE items to the VPMF. Items will be subjected to an abbreviated Logistic Support Analysis to determine sparing, documentation and/or training requirements. Considerations will be made based on the turn-around-time to replace items, skill levels of HTSC personnel at the VPMF and available documentation to support items at the VPMF.

CHAPTER 9. PERSONNEL AND TRAINING

Per the requirements of the contract, the ILSP has been tailored to exclude this chapter.

CHAPTER 10. FUNDING

Per the requirements of the contract, the ILSP has been tailored to exclude this chapter.

CHAPTER 11. COMPUTER RESOURCE SUPPORT

11.1 GENERAL.

HTSC maintains a CS Control Display Unit (CDU) and Remote Display Unit (RDU) as well as various components of the CMS at the PMO. This provides our off-site engineering staff the capability to perform system analysis, testing, and training as related to future and ongoing operations.

Computer resources utilized in support of prime mission equipment will be maintained and controlled under the VPMP CMP (CDRL A011).

Within the last two years, on the OSMP, HTSC has implemented several ECPs that have positioned us for continued support of the systems located at the VPMF. Several areas of the CS have in the past proven to be extremely difficult to support due to the lack of documentation of the embedded software.

11.2 CARGOSCAN SOFTWARE.

HTSC will maintain configuration control of all CS software. Executable and source code programs are maintained at the PMO with only executable software released to the VPMF. HTSC will maintain a test bed of available CS equipment at the PMO to conduct training, system analysis, and testing. HTSC will continue to broaden our knowledge base of the American Science & Engineering (AS&E) imaging system software to continue to enhance overall support capabilities.

With the implementation of the new barcode computer and software, HTSC eliminated a previously undocumented component of the CS. The hardware and software are now documented and under configuration control.

The other area of concern with the CS is the software developed by American Science & Engineering (AS&E). HTSC has procured, under a shared data rights agreement, the software source code and available documentation from AS&E. Functional descriptions of the various software modules have been completed allowing HTSC to control and support the software. This will provide HTSC with the necessary documentation and understanding required to be capable of performing future modifications.

11.3 CONTINUOUS MONITORING SYSTEM SOFTWARE.

HTSC will maintain configuration control of all CMS software. Executable and source code programs will be maintained at the PMO with only executable software released to the VPMF. HTSC will maintain a test bed of available CMS equipment at the PMO to conduct training, system analysis, and testing. System harddrives will be maintained with the current software releases for the CMS to ensure that all functional elements of the test bed remain identical to the actual deployed equipment. This compatibility and functionality will allow the off-site Systems Engineering staff to effectively provide technical support for fault isolation, test and evaluation, and training activities.

11.4 OSE SOFTWARE.

For other computer systems located at the VPMF, such as the office Macintosh network, HTSC will maintain control and configuration as detailed in the ADPE Plan. The ADPE Plan will detail the network topology and the commercial software packages to be installed on each component of the network. Additional guidance will be provided in the ADPE Plan explaining user file handling, backup procedures, change requests, etc. As new systems or software packages are required, the ADPE Plan will be updated to reflect the latest configuration at the VPMF.

Appendix A NOTES

The notes section contains general acronyms that are not required, but may enhance the understanding of the ILSP.

A.1 Acronyms

ADPE	Automated Data Processing Equipment
AFB	Air Force Base
AS&E	American Science and Engineering
CDRL	Contract Data Requirements List
CDU	Control Display Unit
CM	Configuration Management
CMP	Configuration Management Plan
CMS	Continuous Monitoring System
CONUS	Continental United States
CP	Central Processor
CS	Cargoscan System
DAU	Data Acquisition Unit
DCC	Data Collection Center
DFAR	Defense Federal Acquisition Regulation
DRS	Data Review Station
DSP	Digital Signal Processor
EBP	Exit Block Processor
ECA	Engineering Change Analysis
ECP	Engineering Change Proposal
ECR	Engineering Change Request
EO	Engineering Order
FAR	Federal Acquisition Regulation
FOE	Field Office Europe
HTSC	Hughes Technical Services Company
IATA	International Air Transport Association
ICBM	InterContinental Ballistic Missiles
ILS	Integrated Logistics Support
INF	Intermediate Nuclear Forces
IR	Infrared
LRU	Lowest Replaceable Unit
LSA	Logistic Support Analysis
MacAMRS	Macintosh Automated Maintenance Reporting System
MAN	Manufacturer
MILAIR	Military Air
MPR	Material Provisioning Request

A.1 Acronyms (Continued)

OCONUS	Outside Continental United States
OEM	Original Equipment Manufacturer
OIP	Operator Interface Panel
OSE	Other Support Equipment
OSIA	On-Site Inspection Agency
OSIA EO	OSIA European Operations
OSIA DR	OSIA Directorate of Resources
OSIA IOM	OSIA Monitoring Operations Division
OSPMS	On-Site Portal Monitoring System
PM	Preventive Maintenance
PME	Prime Mission Equipment
PMO	Program Management Office
RDU	Remote Display Unit
RFM	Request For Material
RPR	Repair / Replenish
SKU	Stock Keeping Unit
SM&R	Source Maintenance & Recoverability
START	Strategic Arms Reduction Treaty
TCN	Tracking Control Number
TDP	Technical Data Package
UHF	Ultra High Frequency
UPS	Uninterruptable Power Supply
US	United States
USG	United States Government
VEN	Vendor
VIC	Votkinsk Indenture Code
VMP	Votkinsk Maintenance Plan
VPMF	Votkinsk Portal Monitoring Facility
VPMP	Votkinsk Portal Monitoring Program
WUC	Work Unit Code